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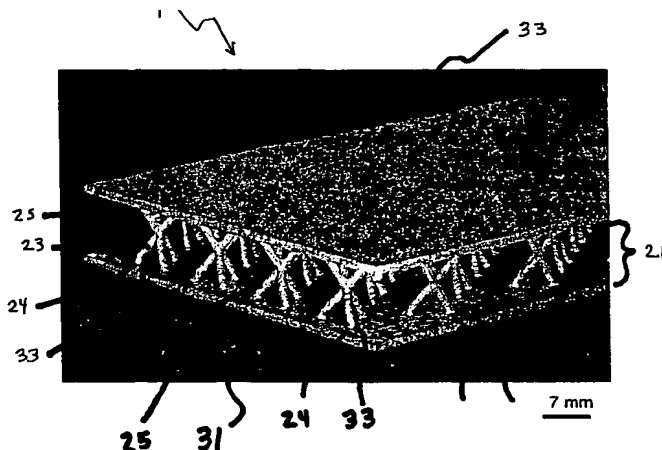
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[Continued on next page]

(54) Title: METHOD FOR MANUFACTURE OF TRUSS CORE SANDWICH STRUCTURES AND RELATED STRUCTURES THEREOF



(57) Abstract: An embodiment provides a method of constructing a cellular structure having nodes (24) therein comprising: providing at least one truss layer (23) comprised of at least one truss unit, at least one of the truss units being comprised of truss members (22); providing at least one panel (21) in mechanical communication with the at least one truss unit of the at least one truss layer, the mechanical communication defined contact regions wherein the at least one truss unit is coupled to the at least one panel; the nodes being defined as intersections existing among any of the truss members and the nodes also being defined by the contact regions (33); providing at least one node pin (41), the at least one node pin spanning between two desired nodes; and diffusion bonding at least one of the truss layer to the at least one panel. The bonding includes: applying heat, and applying force that results in the truss layer and the panel that are being bonded to be pressed together, the node pins provide support for the structure so as to concentrate or transmit the applied force onto the contact regions.



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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/27606

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B23K 28/00

US CL : 228/193, 194, 195

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 228/193, 194, 195

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 2002/0170941 A1 (WALLACH et al) 21 November 2002, entire document.	1-41
A	US 4,530,197 A (RAINVILLE) 23 July 1985, entire document.	1-41
A	US 4,916,027 A (DELMUNDO) 10 April 1990, entire document.	1-41
A	US 5,401,583 A (STACHER et al) 28 March 1995, entire document.	1-41

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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**INTERNATIONAL SEARCH REPORT**

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**Continuation of B. FIELDS SEARCHED Item 3:**

**EAST:**

truss, node, nodes, nodal, diffusion